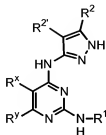


AMENDMENTS TO THE CLAIMS

Please replace all prior versions and listings of claims with the amended claims as follows:

1. (Currently amended) A compound of formula **IIIc**:



IIIc

or a pharmaceutically acceptable salt thereof, wherein:

R^x is ~~T-R³~~ or ~~L-Z-R³~~ hydrogen;

R^y is independently selected from T-R⁸ or L-Z-R³, wherein R⁸ is selected from an optionally substituted group selected from C₁₋₆ aliphatic, C₆₋₁₀ aryl, a heteroaryl ring having 5-10 ring atoms, a heterocyclyl ring having 5-10 ring atoms, [[-halo]], -OR, -C(=O)R, -CO₂R, -COCOR, -COCH₂COR, -NO₂, -CN, -S(O)R, -S(O)₂R, -SR, -N(R⁴)₂, -CON(R⁷)₂, -SO₂N(R⁷)₂, -OC(=O)R, -N(R⁷)COR, -N(R⁷)CO₂(C₁₋₆ aliphatic), -N(R⁴)N(R⁴)₂, -C=NN(R⁴)₂, -C=N-OR, -N(R⁷)CON(R⁷)₂, -N(R⁷)SO₂N(R⁷)₂, -N(R⁴)SO₂R, or -OC(=O)N(R⁷)₂;

R¹ is T-(Ring D);

Ring D is a 5-7 membered monocyclic ring or 8-10 membered bicyclic ring selected from aryl, heteroaryl, heterocyclyl or carbocyclyl, said heteroaryl or heterocyclyl ring having 1-4 ring heteroatoms selected from nitrogen, oxygen or sulfur, wherein Ring D is substituted at any substitutable ring carbon by oxo, T-R⁵, or V-Z-R⁵, and at any substitutable ring nitrogen by -R⁴;

T is a valence bond or a C₁₋₄ alkylidene chain;

Z is a C₁₋₄ alkylidene chain;

L is -O-, -S-, -SO-, -SO₂-, -N(R⁶)SO₂-, -SO₂N(R⁶)-, -N(R⁶)-, -CO-, -CO₂-, -N(R⁶)CO-, -N(R⁶)C(O)O-, -N(R⁶)CON(R⁶)-, -N(R⁶)SO₂N(R⁶)-, -N(R⁶)N(R⁶)-, -C(O)N(R⁶)-,

$-\text{OC}(\text{O})\text{N}(\text{R}^6)-$, $-\text{C}(\text{R}^6)_2\text{O}-$, $-\text{C}(\text{R}^6)_2\text{S}-$, $-\text{C}(\text{R}^6)_2\text{SO}-$, $-\text{C}(\text{R}^6)_2\text{SO}_2-$, $-\text{C}(\text{R}^6)_2\text{SO}_2\text{N}(\text{R}^6)-$,
 $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{C}(\text{O})-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{C}(\text{O})\text{O}-$, $-\text{C}(\text{R}^6)=\text{NN}(\text{R}^6)-$,
 $-\text{C}(\text{R}^6)=\text{N}-\text{O}-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{N}(\text{R}^6)-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{SO}_2\text{N}(\text{R}^6)-$, or $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{CON}(\text{R}^6)-$;
 R^2 and R^2 are independently selected from $-\text{R}$, $-\text{T}-\text{W}-\text{R}^6$, or R^2 and R^2 are taken together with their intervening atoms to form a fused, 5-8 membered, unsaturated or partially unsaturated, ring having 0-3 ring heteroatoms selected from nitrogen, oxygen, or sulfur, wherein each substitutable carbon on said fused ring formed by R^2 and R^2 is substituted by halo, oxo, $-\text{CN}$, $-\text{NO}_2$, $-\text{R}^7$, or $-\text{V}-\text{R}^6$, and any substitutable nitrogen on said ring formed by R^2 and R^2 is substituted by R^4 ;
 R^3 is selected from $-\text{R}$, $-\text{halo}$, $-\text{OR}$, $-\text{C}(=\text{O})\text{R}$, $-\text{CO}_2\text{R}$, $-\text{COCOR}$, $-\text{COCH}_2\text{COR}$, $-\text{NO}_2$, $-\text{CN}$, $-\text{S}(\text{O})\text{R}$, $-\text{S}(\text{O})_2\text{R}$, $-\text{SR}$, $-\text{N}(\text{R}^4)_2$, $-\text{CON}(\text{R}^7)_2$, $-\text{SO}_2\text{N}(\text{R}^7)_2$, $-\text{OC}(=\text{O})\text{R}$, $-\text{N}(\text{R}^7)\text{COR}$, $-\text{N}(\text{R}^7)\text{CO}_2(\text{C}_{1-6}\text{ aliphatic})$, $-\text{N}(\text{R}^4)\text{N}(\text{R}^4)_2$, $-\text{C}=\text{NN}(\text{R}^4)_2$, $-\text{C}=\text{N}-\text{OR}$, $-\text{N}(\text{R}^7)\text{CON}(\text{R}^7)_2$, $-\text{N}(\text{R}^7)\text{SO}_2\text{N}(\text{R}^7)_2$, $-\text{N}(\text{R}^4)\text{SO}_2\text{R}$, or $-\text{OC}(=\text{O})\text{N}(\text{R}^7)_2$;
each R is independently selected from hydrogen or an optionally substituted group selected from C_{1-6} aliphatic, C_{6-10} aryl, a heteroaryl ring having 5-10 ring atoms, or a heterocyclyl ring having 5-10 ring atoms;
each R^4 is independently selected from $-\text{R}^7$, $-\text{COR}^7$, $-\text{CO}_2(\text{optionally substituted } \text{C}_{1-6}\text{ aliphatic})$, $-\text{CON}(\text{R}^7)_2$, or $-\text{SO}_2\text{R}^7$;
each R^5 is independently selected from $-\text{R}$, halo, $-\text{OR}$, $-\text{C}(=\text{O})\text{R}$, $-\text{CO}_2\text{R}$, $-\text{COCOR}$, $-\text{NO}_2$, $-\text{CN}$, $-\text{S}(\text{O})\text{R}$, $-\text{SO}_2\text{R}$, $-\text{SR}$, $-\text{N}(\text{R}^4)_2$, $-\text{CON}(\text{R}^4)_2$, $-\text{SO}_2\text{N}(\text{R}^4)_2$, $-\text{OC}(=\text{O})\text{R}$, $-\text{N}(\text{R}^4)\text{COR}$, $-\text{N}(\text{R}^4)\text{CO}_2(\text{optionally substituted } \text{C}_{1-6}\text{ aliphatic})$, $-\text{N}(\text{R}^4)\text{N}(\text{R}^4)_2$, $-\text{C}=\text{NN}(\text{R}^4)_2$, $-\text{C}=\text{N}-\text{OR}$, $-\text{N}(\text{R}^4)\text{CON}(\text{R}^4)_2$, $-\text{N}(\text{R}^4)\text{SO}_2\text{N}(\text{R}^4)_2$, $-\text{N}(\text{R}^4)\text{SO}_2\text{R}$, or $-\text{OC}(=\text{O})\text{N}(\text{R}^4)_2$;
 V is $-\text{O}-$, $-\text{S}-$, $-\text{SO}-$, $-\text{SO}_2-$, $-\text{N}(\text{R}^6)\text{SO}_2-$, $-\text{SO}_2\text{N}(\text{R}^6)-$, $-\text{N}(\text{R}^6)-$, $-\text{CO}-$, $-\text{CO}_2-$, $-\text{N}(\text{R}^6)\text{CO}-$, $-\text{N}(\text{R}^6)\text{C}(\text{O})\text{O}-$, $-\text{N}(\text{R}^6)\text{CON}(\text{R}^6)-$, $-\text{N}(\text{R}^6)\text{SO}_2\text{N}(\text{R}^6)-$, $-\text{N}(\text{R}^6)\text{N}(\text{R}^6)-$, $-\text{C}(\text{O})\text{N}(\text{R}^6)-$, $-\text{OC}(\text{O})\text{N}(\text{R}^6)-$, $-\text{C}(\text{R}^6)_2\text{O}-$, $-\text{C}(\text{R}^6)_2\text{S}-$, $-\text{C}(\text{R}^6)_2\text{SO}-$, $-\text{C}(\text{R}^6)_2\text{SO}_2-$, $-\text{C}(\text{R}^6)_2\text{SO}_2\text{N}(\text{R}^6)-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{C}(\text{O})-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{C}(\text{O})\text{O}-$, $-\text{C}(\text{R}^6)=\text{NN}(\text{R}^6)-$, $-\text{C}(\text{R}^6)=\text{N}-\text{O}-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{N}(\text{R}^6)-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{SO}_2\text{N}(\text{R}^6)-$, or $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{CON}(\text{R}^6)-$;
 W is $-\text{C}(\text{R}^6)_2\text{O}-$, $-\text{C}(\text{R}^6)_2\text{S}-$, $-\text{C}(\text{R}^6)_2\text{SO}-$, $-\text{C}(\text{R}^6)_2\text{SO}_2-$, $-\text{C}(\text{R}^6)_2\text{SO}_2\text{N}(\text{R}^6)-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)-$, $-\text{CO}-$, $-\text{CO}_2-$, $-\text{C}(\text{R}^6)\text{OC}(\text{O})-$, $-\text{C}(\text{R}^6)\text{OC}(\text{O})\text{N}(\text{R}^6)-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{CO}-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{C}(\text{O})\text{O}-$, $-\text{C}(\text{R}^6)=\text{NN}(\text{R}^6)-$, $-\text{C}(\text{R}^6)=\text{N}-\text{O}-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{N}(\text{R}^6)-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{SO}_2\text{N}(\text{R}^6)-$, $-\text{C}(\text{R}^6)_2\text{N}(\text{R}^6)\text{CON}(\text{R}^6)-$, or $-\text{CON}(\text{R}^6)-$;

each R^6 is independently selected from hydrogen or an optionally substituted C_{1-4} aliphatic group, or two R^6 groups on the same nitrogen atom are taken together with the nitrogen atom to form a 5-6 membered heterocyclyl or heteroaryl ring; and

each R^7 is independently selected from hydrogen or an optionally substituted C_{1-6} aliphatic group, or two R^7 on the same nitrogen are taken together with the nitrogen to form a 5-8 membered heterocyclyl or heteroaryl ring.

2. (Currently amended) The compound according to claim 1, wherein said compound has one or more features selected from the group consisting of:

- ~~(a)~~ R^8 is hydrogen, alkyl or dialkylamino, acetamido, or a C_{1-4} aliphatic group;
- ~~(b)~~ ~~(a)~~ R^y is $T-R^8$ or $L-Z-R^3$, wherein T is a valence bond or a methylene and R^3 is $-R$, $-N(R^4)_2$, or $-OR$ and R^8 is an optionally substituted group selected from C_{1-6} aliphatic, C_{6-10} aryl, a heteroaryl ring having 5-10 ring atoms, or a heterocyclyl ring having 5-10 ring atoms, $-N(R^4)_2$ or $-OR$;
- ~~(c)~~ ~~(b)~~ R^1 is $T-(Ring\ D)$, wherein T is a valence bond or a methylene unit;
- ~~(d)~~ ~~(c)~~ Ring D is a 5-7 membered monocyclic or an 8-10 membered bicyclic aryl or heteroaryl ring; and
- ~~(e)~~ ~~(d)~~ R^2 is $-R$ or $-T-W-R^6$ and $R^{2'}$ is hydrogen, or R^2 and $R^{2'}$ are taken together to form an optionally substituted benzo ring.

3. (Currently amended) The compound according to claim 2, wherein:

- ~~(a)~~ R^8 is hydrogen, alkyl or dialkylamino, acetamido, or a C_{1-4} aliphatic group;
- ~~(b)~~ ~~(a)~~ R^y is $T-R^8$ or $L-Z-R^3$, wherein T is a valence bond or a methylene and R^3 is $-R$, $-N(R^4)_2$, or $-OR$ and R^8 is an optionally substituted group selected from C_{1-6} aliphatic, C_{6-10} aryl, a heteroaryl ring having 5-10 ring atoms, or a heterocyclyl ring having 5-10 ring atoms, $-N(R^4)_2$ or $-OR$;
- ~~(c)~~ ~~(b)~~ R^1 is $T-(Ring\ D)$, wherein T is a valence bond or a methylene unit;
- ~~(d)~~ ~~(c)~~ Ring D is a 5-7 membered monocyclic or an 8-10 membered bicyclic aryl or heteroaryl ring; and
- ~~(e)~~ ~~(d)~~ R^2 is $-R$ or $-T-W-R^6$ and $R^{2'}$ is hydrogen, or R^2 and $R^{2'}$ are taken together to form an optionally substituted benzo ring.

4. (Previously presented) The compound according to claim 2, wherein said compound has one or more features selected from the group consisting of:

- (a) R^Y is $T-R^8$ or $L-Z-R^3$ wherein T is a valence bond or a methylene and R^3 and R^8 are selected from $-R$, $-OR$, or $-N(R^4)_2$, wherein R is selected from C_{1-6} aliphatic, or 5-6 membered heterocyclyl, phenyl, or 5-6 membered heteroaryl;
- (b) R^1 is $T-(\text{Ring D})$, wherein T is a valence bond;
- (c) Ring D is a 5-6 membered monocyclic or an 8-10 membered bicyclic aryl or heteroaryl ring;
- (d) R^2 is $-R$ and $R^{2'}$ is hydrogen, wherein R is selected from hydrogen, C_{1-6} aliphatic, phenyl, a 5-6 membered heteroaryl ring, or a 5-6 membered heterocyclic ring; and
- (e) L is $-O-$, $-S-$, or $-N(R^4)-$.

5. (Previously presented) The compound according to claim 4, wherein:

- (a) R^Y is $T-R^8$ or $L-Z-R^3$ wherein T is a valence bond or a methylene and R^3 and R^8 are selected from $-R$, $-OR$, or $-N(R^4)_2$, wherein R is selected from C_{1-6} aliphatic, or 5-6 membered heterocyclyl, phenyl, or 5-6 membered heteroaryl;
- (b) R^1 is $T-(\text{Ring D})$, wherein T is a valence bond;
- (c) Ring D is a 5-6 membered monocyclic or an 8-10 membered bicyclic aryl or heteroaryl ring;
- (d) R^2 is $-R$ and $R^{2'}$ is hydrogen, wherein R is selected from hydrogen, C_{1-6} aliphatic, phenyl, a 5-6 membered heteroaryl ring, or a 5-6 membered heterocyclic ring; and
- (e) L is $-O-$, $-S-$, or $-N(R^4)-$.

6. (Currently amended) The compound according to claim 4, wherein said compound has one or more features selected from the group consisting of:

- (a) ~~R^8 is hydrogen, methyl, ethyl, propyl, cyclopropyl, isopropyl, methylamino or acetimido;~~
- ~~(b)~~ (a) R^Y is selected from 2-pyridyl, 4-pyridyl, pyrrolidinyl, piperidinyl, morpholinyl, piperazinyl, methyl, ethyl, cyclopropyl, isopropyl, t-butyl, alkoxyalkylamino, alkoxyalkyl, alkyl- or dialkylamino, alkyl- or dialkylaminoalkoxy, acetamido, optionally substituted phenyl, or methoxymethyl;

- (e)-(b) R^1 is T-(Ring D), wherein T is a valence bond and Ring D is a 5-6 membered aryl or heteroaryl ring, wherein Ring D is optionally substituted with one to two groups selected from -halo, -CN, $-NO_2$, $-N(R^4)_2$, optionally substituted C_{1-6} aliphatic group, -OR, $-CO_2R$, $-CONH(R^4)$, $-N(R^4)COR$, $-N(R^4)SO_2R$, $-N(R^6)COCH_2CH_2N(R^4)_2$, or $-N(R^6)COCH_2CH_2CH_2N(R^4)_2$; and
- (d)-(c) R^2 is hydrogen or a substituted or unsubstituted C_{1-6} aliphatic, and L is $-O-$, $-S-$, or $-NH-$.

7. (Currently amended) The compound according to claim 6, wherein:

- (a) R^3 is hydrogen methyl, ethyl, propyl, cyclopropyl, isopropyl, methylamino or acetimido;
- (b)-(a) R^2 is selected from 2-pyridyl, 4-pyridyl, pyrrolidinyl, piperidinyl, morpholinyl, piperazinyl, methyl, ethyl, cyclopropyl, isopropyl, t-butyl, alkoxyalkylamino, alkoxyalkyl, alkyl- or dialkylamino, alkyl- or dialkylaminoalkoxy, acetamido, optionally substituted phenyl, or methoxymethyl;
- (e)-(b) R^1 is T-(Ring D), wherein T is a valence bond and Ring D is a 5-6 membered aryl or heteroaryl ring, wherein Ring D is optionally substituted with one to two groups selected from -halo, -CN, $-NO_2$, $-N(R^4)_2$, optionally substituted C_{1-6} aliphatic group, -OR, $-CO_2R$, $-CONH(R^4)$, $-N(R^4)COR$, $-N(R^4)SO_2R$, $-N(R^6)COCH_2CH_2N(R^4)_2$, or $-N(R^6)COCH_2CH_2CH_2N(R^4)_2$; and
- (d)-(c) R^2 is hydrogen or a substituted or unsubstituted C_{1-6} aliphatic, and L is $-O-$, $-S-$, or $-NH-$.

8. (Original) A compound selected from the group consisting of:

- (5-Methyl-2H-pyrazol-3-yl)-(6-phenyl-2-phenylamino-pyrimidin-4-yl)-amine;
- (5-Cyclopropyl-2H-pyrazol-3-yl)-(6-phenyl-2-phenylamino-pyrimidin-4-yl)-amine;
- (5-Cyclopropyl-2H-pyrazol-3-yl)-[2-(3-methylphenylamino)-6-phenyl-pyrimidin-4-yl]-amine;
- [2-(4-cyanomethylphenylamino)-6-phenyl-pyrimidin-4-yl]-(5-cyclopropyl-2H-pyrazol-3-yl)-amine;
- (5-Cyclopropyl-2H-pyrazol-3-yl)-[6-phenyl-2-(pyridin-3-ylmethylamino)-pyrimidin-4-yl]-amine;

[2-(3-Chlorophenyl)amino-6-(3-nitrophenyl)-pyrimidin-4-yl]-(5-methyl-2*H*-pyrazol-3-yl)-amine;

[2-(3-Chlorophenyl)amino-6-(3,4,5-trimethoxyphenyl)-pyrimidin-4-yl]-(5-methyl-2*H*-pyrazol-3-yl)-amine;

(5-Methyl-2*H*-pyrazol-3-yl)-[2-(4-sulfamoylphenylamino)-6-(3,4,5-trimethoxyphenyl)-pyrimidin-4-yl]-amine;

[2-(4-Chlorophenyl)amino-6-methyl-pyrimidin-4-yl]-[5-(furan-2-yl)-2*H*-pyrazol-3-yl]-amine;

[2-(Benzimidazol-2-ylamino)-6-ethyl-pyrimidin-4-yl]-(5-methyl-2*H*-pyrazol-3-yl)-amine;

[2-(4-Chlorophenyl)amino-6-methyl-pyrimidin-4-yl]-(5-phenyl-2*H*-pyrazol-3-yl)-amine;

[2-(4-Chlorophenyl)amino-6-ethyl-pyrimidin-4-yl]-(5-methyl-2*H*-pyrazol-3-yl)-amine;

(5-*tert*-Butyl-2*H*-pyrazol-3-yl)-[2-(3-chlorophenyl)amino-6-(3-nitrophenyl)-pyrimidin-4-yl]-amine;

[2-(3-Chlorophenyl)amino-6-(3-nitrophenyl)-pyrimidin-4-yl]-(5-phenyl-2*H*-pyrazol-3-yl)-amine;

[5-(Furan-2-yl)-2*H*-pyrazol-3-yl]-(6-phenyl-2-phenylamino-pyrimidin-4-yl)-amine;

[2-(Benzimidazol-2-ylamino)-6-methyl-pyrimidin-4-yl]-(5-phenyl-2*H*-pyrazol-3-yl)-amine;

[2-(Benzimidazol-2-ylamino)-6-methyl-pyrimidin-4-yl]-[5-(Furan-2-yl)-2*H*-pyrazol-3-yl]-amine;

[2-(4-Chlorophenylamino)-6-methyl-pyrimidin-4-yl]-(5-methyl-2*H*-pyrazol-3-yl)-amine;

[2-(4-Chlorophenyl)amino-5,6-dimethyl-pyrimidin-4-yl]-(5-methyl-2*H*-pyrazol-3-yl)-amine;

(5,6-Dimethyl-2-phenylamino-pyrimidin-4-yl)-(5-methyl-2*H*-pyrazol-3-yl)-amine;

[2-(4-Chlorophenyl)amino-6-methoxymethyl-pyrimidin-4-yl]-(5-methyl-2*H*-pyrazol-3-yl)-amine;

[2-(Benzimidazol-2-ylamino)-6-methoxymethyl-pyrimidin-4-yl]-(5-methyl-2*H*-pyrazol-3-yl)-amine;

(6-Methoxymethyl-2-phenylamino-pyrimidin-4-yl)-(5-methyl-2H-pyrazol-3-yl)-amine;

(6-Methyl-2-phenylamino-pyrimidin-4-yl)-(5-methyl-2H-pyrazol-3-yl)-amine;

*N*⁴-(5-Cyclopropyl-1H-pyrazol-3-yl)-*N*²-(1H-indazol-5-yl)-6-methyl-pyrimidine-2,4-diamine; and

*N*²-Benzothiazol-6-yl-*N*⁴-(5-cyclopropyl-1H-pyrazol-3-yl)-6-methyl-pyrimidine-2,4-diamine.

9. (Original) A composition comprising a compound according to any one of claims 1-8; and a pharmaceutically acceptable carrier.

10. (Original) The composition according to claim 9, further comprising an additional therapeutic agent.

11-13. (Canceled)

14. (Previously presented) A method of treating melanoma, lymphoma, neuroblastoma, leukemia, or a cancer selected from colon, breast, lung, kidney, ovary, pancreatic, renal, CNS, cervical, prostate, and cancer of the gastric tract, said method comprising the step of administering to said patient a composition according to any one of claims 1-8.

15. (Canceled)

16. (Previously presented) The method according to claim 14, wherein said method further comprises administering an additional therapeutic agent selected from a chemotherapeutic agent or anti-proliferative agent.

17. (Original) The method according to claim 16, wherein said additional therapeutic agent is a chemotherapeutic agent.

18-19. (Canceled)

20. (Previously presented) A method of treating diabetes and schizophrenia, which method comprises administering to a patient in need of such a treatment a therapeutically effective amount of a composition according to claim 9.

21. (Canceled)

22. (Previously presented) The method according to claim 20, wherein said disease is diabetes.

23-26. (Canceled)

27. (Previously presented) A method of treating osteoporosis, colon cancer, or ovarian cancer, which method comprises administering to a patient in need of such a treatment a therapeutically effective amount of a composition according to claim 9.